

6. (Currently Amended) A method of receiving data transmissions at a base station in a wireless frequency hopping (FH) communication system, comprising:

obtaining received symbols for a plurality of subbands;

processing the received symbols to obtain decoded data for each of at least one primary terminal, wherein the at least one primary terminal is assigned at least one primary FH sequence to use for data transmission, and wherein the at least one primary FH sequence is orthogonal to ~~at least one other primary FH sequence~~ ^{at least one other primary FH sequence};

estimating interference due to the at least one primary terminal;

canceling the interference due to the at least one primary terminal from the received symbols to obtain interference-canceled symbols; and

processing the interference-canceled symbols to obtain decoded data for each of at least one secondary terminal, wherein the at least one secondary terminal is assigned at least one secondary FH sequence to use for data transmission, and wherein the at least one secondary FH sequence is not orthogonal to the at least one primary FH sequence.

7. (Original) The method of claim 6, wherein the at least one primary terminal is assigned the at least one primary FH sequence by the base station, and wherein the at least one secondary terminal is assigned the at least one secondary FH sequence by neighboring base stations of the base station.

8. (Original) The method of claim 6, wherein each of the at least one secondary terminal is in soft handoff with at least two base stations that include the base station.

9. (Original) The method of claim 8, wherein a first secondary terminal among the at least one secondary terminal is in soft handoff with at least two base stations for at least two different sectors of one cell in the system.

10. (Original) The method of claim 8, wherein a first secondary terminal among the at least one secondary terminal is in soft handoff with at least two base stations for at least two different cells in the system.

17. (Original) The method of claim 6, wherein the processing the interference-canceled symbols includes for each of the at least one secondary terminal,
obtaining interference-canceled symbols on subbands indicated by a secondary FH sequence assigned to the secondary terminal, and
demodulating and decoding the interference-canceled symbols for the secondary terminal to obtain the decoded data for the secondary terminal.

18. (Original) The method of claim 6, wherein the wireless communication system is an orthogonal frequency division multiple access (OFDMA) communication system.

19. (Previously Amended) An apparatus in a wireless frequency hopping (FH) communication system, comprising:

means for obtaining received symbols for a plurality of subbands;
means for processing the received symbols to obtain decoded data for each of at least one primary terminal, wherein the at least one primary terminal is assigned at least one primary FH sequence to use for data transmission, and wherein the at least one primary FH sequence is orthogonal to at least one other primary FH sequence;
means for estimating interference due to the at least one primary terminal;
means for canceling the interference due to the at least one primary terminal from the received symbols to obtain interference-canceled symbols; and
means for processing the interference-canceled symbols to obtain decoded data for each of at least one secondary terminal, wherein the at least one secondary terminal is assigned at least one secondary FH sequence to use for data transmission, and wherein the at least one secondary FH sequence is not orthogonal to the at least one primary FH sequence

20. (Currently Amended) An apparatus in a wireless frequency hopping (FH) communication system, comprising:

at least one first data processor operative to process received symbols to obtain decoded data for each of at least one primary terminal, wherein the at least one primary terminal is assigned at least one primary FH sequence to use for data transmission, and wherein the at least one primary FH sequence is orthogonal ~~to~~^{to} at least one other primary FH sequence;